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Georgia Southern Associate Dean Serves as Guest Editor for the Special Issue on Health Informatics

November 9, 2016

Dr. Gulzar Shah, Associate Dean for Research at the Jiann-Ping Hsu College of Public Health Georgia Southern University, served as guest editor for the November/December Supplement issue of the practice-relevant peer reviewed journal, Journal of Public Health Management & Practice. This special issue on health informatics is based on a study of informatics needs and capacities of local health departments conducted by Georgia Southern, with funding from the Centers for Disease Control and Prevention and the National Association of County and City Health Officials (NACCHO).

Dr. Shah was formerly the Lead Research Scientist for the National Association of City and County Health Officials, NACCHO, where he supported health informatics initiatives and research, Dr. Shah joined JPHCOPH as an Associate Professor of Health Policy and Management in January 2012 and was promoted to Associate Dean of Research in 2014.
Georgia Southern: Examines Estimation of $P(X > Y)$ when $X$ and $Y$ are Dependent Random Variables

November 9, 2016

The stress-strength models have been intensively investigated in the literature in regards of estimating the reliability $\theta = P(X > Y)$ using parametric and nonparametric approaches under different sampling schemes when $X$ and $Y$ are independent random variables. In this paper, we consider the problem of estimating $\theta$ when $(X, Y)$ are dependent random variables with a bivariate underlying distribution. The empirical and kernel estimates of $\theta = P(X > Y)$, based on bivariate ranked set sampling (BVRSS) are considered, when $(X, Y)$ are paired dependent continuous random variables. The estimators obtained are compared to their counterpart, bivariate simple random sampling (BVSRS), via the bias and mean square error (MSE).

We demonstrate that the suggested estimators based on BVRSS are more efficient than those based on BVSRS. A simulation study is conducted to gain insight into the performance of the proposed estimators. A real data example is provided to illustrate the process.

"Estimation of $P(X > Y)$ when $X$ and $Y$ are dependent random variables using different bivariate sampling schemes," was published in Communications for Statistical Applications and Methods.

Dr. Hani Samawi, Professor of Biostatistics at the Jiann-Ping Hsu College of Public Health Georgia Southern University (JPHCOPH), was the lead author. Dr. Haresh Rochani, Director of the Karl E. Peace Center for Biostatistics (JPHCOPH) and Jingjing Yin, Assistant Professor of Biostatistics (JPHCOPH) were co-authors.